

WATANABE, Serial No. 09/933,899

Docket No. 500.40538X00

**REMARKS**

Claims 1-13 are pending in this application. Claims 1-6 have been amended in several particulars for purposes of clarity and brevity that are unrelated to patentability and prior art rejections while Claims 7-13 have been newly added in accordance with current Office policy, to further and alternatively define Applicants' disclosed invention and to assist the Examiner to expedite compact prosecution of the instant application.

Claims 1-6 have been rejected under 35 U.S.C. §102(b) as being anticipated by Kuno, U.S. Patent No. 5,572,382 for reasons stated on pages 2-3 of the Office Action (Paper No. 4). Specifically, the Examiner cites FIGs. 4A-4E of Kuno '382 which describe the process of aligning a disk 16A with a rotor 11, albeit using air suction performed by an automatic fitting machine (not shown in Kuno '382).

The rejection is respectfully traversed, however. Applicants submit that the features of Applicants' claims 1-6 are not disclosed or suggested by Kuno '382. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection for the following reasons.

Claims 1-6, as previously pending, define a method of assembling a disc in a disc apparatus using two parallel flat members arranged on opposite sides of the disc, as shown in FIG. 1, so as to center the disc relative to a spindle motor hub. The disc is automatically centered using the first and second flat members 4 and 7 in the manner, as shown in FIG. 3.

For example, independent claim 1 defines a method of assembling a disc in a disc apparatus comprising:

WATANABE, Serial No. 09/933,899

Docket No. 500.40538X00

mounting a disc onto a hub of a spindle motor in a disc apparatus in a state capable of being moved with respect to the hub of the spindle motor in a direction of a disc radius;

pressing an outer diameter of the disc in a direction of a center axis of the hub by a first flat member so as to bring an inner diameter of the disc into contact with an outer diameter of a rotary axis of the hub;

pressing back the outer diameter of the disc contact with the first flat member and the outer diameter of the disc at an opposite position to the center of the disc in an inverse direction to a pressing direction of the first flat member to a half of an amount of tolerance between the inner diameter of the disc and the outer diameter of the hub, by a second flat member arranged in parallel to the first flat member and in an opposite side to the center axis of the hub; and

fixing the disc to the hub of the spindle motor by a clamp member.

Alternatively, independent claim 2 defines a method of assembling a disc in a disc apparatus, comprising:

mounting a disc onto a hub of a spindle motor in a disc apparatus in a state capable of being moved with respect to the hub of the spindle motor in a direction of a disc radius;

pressing an outer diameter of the disc in a direction of a center axis of the hub by a first flat member so as to bring an inner diameter of the disc into contact with an outer diameter of a rotary axis of the hub;

pressing back the outer diameter of the disc contact with the first flat member and the outer diameter of the disc at an opposite position to the center of the disc in an inverse direction to a pressing direction of the first flat member by a second flat member arranged in parallel to the first flat member in an opposite side to the center axis of the hub until the outer diameter of the hub and the inner diameter of the disc are in contact with each other, and measuring a difference between the outer diameter of the hub and the inner diameter of the disc;

pressing back a half of the difference between the outer diameter of the hub and the inner diameter of the disc by the first flat member; and

fixing the disc to the hub of the spindle motor by a clamp member.

As expressly defined in Applicants' claims 1-6, the two parallel flat members are used to press the disc against the hub so that the disc can be accurately and reliably centered. This feature is importantly because previously known equipments typically use **pneumatic pressure** to align the disc relative to the hub, which are

WATANABE, Serial No. 09/933,899

Docket No. 500.40538X00

susceptible to errors and unbalance of rotation since the hub can be deformed or impacted due to heating and cooling operation. See pages 2-3 of Applicants' original specification.

In contrast to Applicants' claims 1-6, Kuno '382 discloses nothing more than the previously known equipments used to fit such a disc relative to a rotor using **pneumatic pressure**. Specifically, on column 6, line 33 extending to column 7, line 19, Kuno '382 discloses that,

"the magnetic disk 16A is fitted onto the rotor yoke 11 in a manner such that the yoke 11 is in its center hole 16a. This operation can be automatically performed by holding the magnetic disk by **air suction using an automatic fitting machine** (not shown). More specifically, a hatched portion of the magnetic disk 16A, as shown in FIG. 4A, is held by air suction by means of the fitting machine, and the disk 16A is fitted on the outer periphery of the rotor yoke 11...

Then, the air suction by the automatic fitting machine is removed. When these processes are executed, centering the magnetic disk 16A is finished, and the disk 16A is mounted on the rotor yoke 11 in a manner such that the gap between the inner circumferential edge of the disk 16A and the outer circumferential surface of the yoke 11 is uniform throughout the circumference..."

As can be seen from the cited portion, and FIGs. 4A-4E of Kuno '382, the disk is centered using well-known equipments utilizing **pneumatic pressure** to align the disc relative to the hub. However, these equipments are susceptible to errors and unbalance of rotation since the hub can be deformed or impacted due to heating and cooling operation.

More importantly, there is **no** disclosure from Kuno '382 nor is there any teaching or suggestion of Applicants' claimed "two parallel flat members" as expressly defined in claims 1-6.

The rule under 35 U.S.C. §102 is well settled that anticipation requires that

WATANABE, Serial No. 09/933,899

Docket No. 500.40538X00

each and every element of the claimed invention be disclosed in a single prior art reference. In re Paulsen, 30 F.3d 1475, 31 USPQ2d 1671 (Fed. Cir. 1994); In re Spada, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990). Those elements must either be inherent or disclosed expressly and must be arranged as in the claim. Richardson v. Suzuki Motor Co., 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989); Constant v. Advanced Micro-Devices, Inc., 848 F.2d 1560, 7 USPQ2d 1057 (Fed. Cir. 1988); Verdegall Bros., Inc. v. Union Oil Co., 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). The corollary of that rule is that absence from the reference of any claimed element negates anticipation. Kloster Speedsteel AB v. Crucible Inc., 793 F.2d 1565, 230 USPQ2d 81 (Fed. Cir. 1986).

The burden of establishing a basis for denying patentability of a claimed invention rests upon the Examiner. The limitations required by the claims cannot be ignored. See In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970). All claim limitations, including those which are functional, must be considered. See In re Oelrich, 666 F.2d 578, 212 USPQ 323 (CCPA 1981). Hence, all words in a claim must be considered in deciding the patentability of that claim against the prior art. Each word in a claim must be given its proper meaning, as construed by a person skilled in the art. Where required to determine the scope of a recited term, the disclosure may be used. See In re Barr, 444 F.2d 588, 170 USPQ 330 (CCPA 1971).

In the present situation, Kuno '382 fails to disclose and suggest novel features of Applicants' claims 1-6. Therefore, Applicants respectfully request that the rejection of claims 1-6 be withdrawn.

Lastly, claims 3-4 have been rejected under 35 U.S.C. §103 as being

WATANABE, Serial No. 09/933,899

Docket No. 500.40538X00

unpatentable over Kuno '382, as modified to incorporate selected features from Schmidt, U.S. Patent No. 4,983,505. This rejection is respectfully traversed, however. Notwithstanding that the correctness of this rejection is predicated upon the correctness of the rejection of claims 1-6, Applicants respectfully submit that features of Applicants' claims 3-4 are not taught or suggested by Kuno '382 and Schmidt '505, whether taken individually or in combination with any other references of record.

For example, Kuno '382, as previously discussed, discloses nothing more than the previously known equipments used to fit such a disc relative to a rotor using **pneumatic pressure**. If **pneumatic pressure** is used in the manner described by Kuno '382, then there is no reason or motivation for any one to utilize any pressurizing means provided "for pressing the disc toward the center axis of the hub in a portion to which the first flat member is mounted", a feature that is expressly defined in Applicants' claims 3-4.

The law under 35 U.S.C. §103 is well settled that "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination." ACS Hospital System, Inc v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). The Examiner must point to something in the prior art that suggests in some way a modification of a particular reference or a combination of references in order to arrive at Applicants' claimed invention. Absent such a showing, the Examiner has improperly used Applicants' disclosure as an instruction book on how to reconstruct to the prior art to arrive at Applicants' claimed invention.

WATANABE, Serial No. 09/933,899

Docket No. 500.40538X00

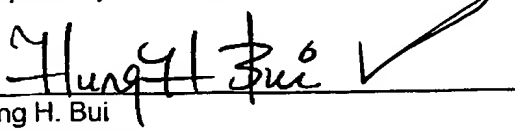
In the present situation, neither Kuno '382 nor Schmidt '505, discloses or suggests the feature of Applicants' claims 3-4. Moreover, in view of the foregoing explanation and the noted deficiencies of Kuno '382, Applicants respectfully request that the rejection of claims 3-4 be withdrawn.

Claims 7-13 have been newly added to alternatively define Applicants' disclosed invention over the prior art of record. These claims are believed to be allowable at least for the same reasons discussed against all the outstanding rejections of the instant application. No fee is incurred by the addition of claims 7-13.

In view of the foregoing amendments, arguments and remarks, all claims are deemed to be allowable and this application is believed to be in condition to be passed to issue. Should any questions remain unresolved, the Examiner is requested to telephone Applicants' attorney at the Washington DC area office at (703) 312-6600.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR §1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including Petition and excess claim fees, to ATS&K Deposit Account No. 01-2135 (referencing case No. 500.40538X00).

Respectfully submitted,

  
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